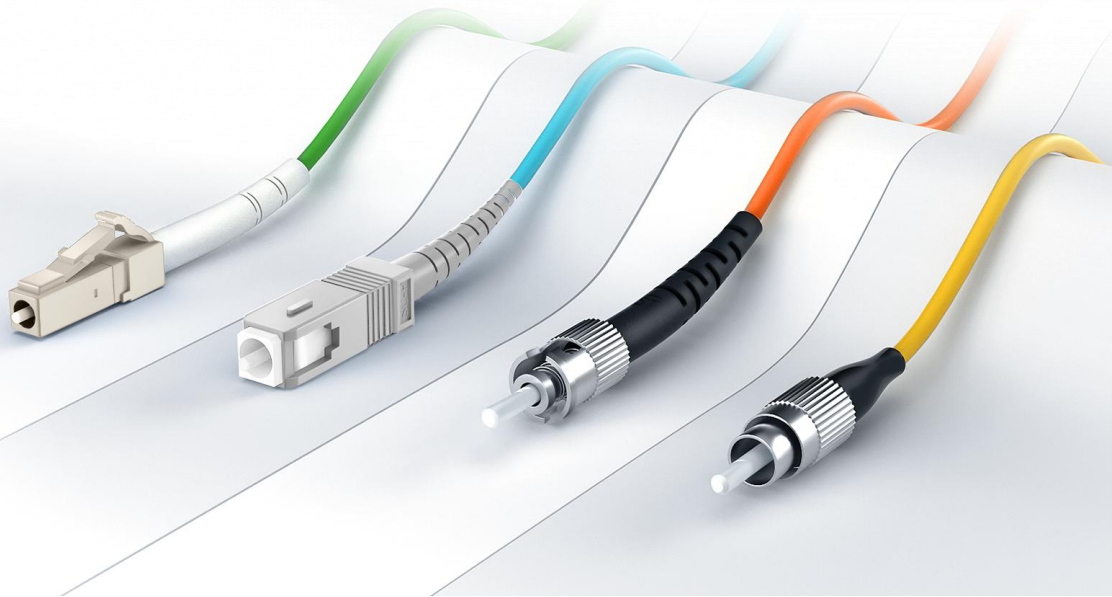


Standard Fiber Patch Cables Datasheet

MAKE HIGH-SPEED ETHERNET NETWORK EQUIPMENT CONNECTIONS

Designed for data center, enterprise, FTTx, LAN and WAN, CATV network, telecom network applications , etc. requiring quick infrastructure deployment such as main, horizontal, and zone distribution areas.



Standard Fiber Patch Cables

Fiber optic patch cables are ideal for supporting high speed telecommunication network fiber applications. They are manufactured and tested in compliance with TIA 604 (FOCIS), IEC 61754 and YD/T industry standards. OM1, OM2, OM3, OM4, OM5 or OS2 fiber types are available to meet the demand of Gigabit Ethernet, 10 Gigabit Ethernet and high speed Fiber Channel. Every termination is through rigorous parameter test to ensure the highest network performance.

Standards Compliance

- RoHS, ISO 9001, CE, REACH, WEEE Compliant
- TIA 604 (FOCIS)
- TIA/EIA 492AAAE
- IEC 61754
- IEC 60793-2-10
- IEC 61300-3-35
- YD/T1272.1-2003

Features

- High quality zirconia ferrules.
- Good repeatability and interchangeability.
- LC/SC/ST/FC/LSH/MTRJ/MU connectors with standard boots are available.
- LC connectors with 12mm/18mm and SC connectors with 25mm short boots are available.
- Flame-retardant, rugged and durable jacket.
- OS2/OM5/OM4/OM3/OM2/OM1 are available.
- Factory terminated and tested for insertion loss, return loss and end face.

Technical Specification

| Physical Characteristics | Description |
|--------------------------|--|
| Connector Types | LC/SC/ST/FC/LSH/MTRJ/MU with Standard Boots; LC 12mm/18mm with Short Boots; SC 25mm with Short Boots |
| Polish Type | SMF: UPC-UPC; UPC-APC; APC-APC; MMF: UPC-UPC |
| Connector Ferrule | Zirconia Ceramic |
| Cable Outside Diameter | Duplex: 1.6/2.0/3.0mm, Simplex: 0.9/2.0/3.0mm |
| Interchangeability | ≤0.2dB |
| Vibration | ≤0.2dB |

| Mechanical Characteristics | Description |
|----------------------------|---|
| Fiber Type | Standard Boots: OS2/OM5/OM4/OM3/OM2/OM1; Short Boots: OS2/OM4/OM3 |
| Fiber Count | Duplex/Simplex |
| Cable Jacket | PVC (Riser/OFNR)/LSZH/Plenum (OFNP) |
| Fiber Grade | SMF: G.657.A1/G.657.A2; OM5/OM4/OM3/OM2: Bend Insensitive; OM1: G.651 |

| Fiber Mode | Connector Type | Connector Color | Jacket Color |
|------------|----------------|-----------------|--------------|
| OS2 | LC | Blue/Green | Yellow |
| | SC | | |
| | ST | Black | |
| | FC | | |
| OM1/OM2 | LC | Beige | Orange |
| | SC | Black | |
| | ST | | |
| OM3 | LC | Beige | Aqua |
| | SC | Aqua | |
| | ST | Black | |
| OM4 | LC | Beige | Aqua |
| | SC | Beige | Aqua |
| OM5 | LC | Beige | Lime Green |

| Minimum Bend Radius | | SMF | MMF |
|---------------------------------|------------------|-----------------------------------|----------------------------|
| Fiber Cable (Dynamic/Static) | OD 2.0/3.0mm | 10/5D | 20/10D |
| | OD 1.6mm | 10/5D | - |
| | OD 0.9mm | 10mm | OM1: 15mm Others: 7.5mm |
| Fiber Core | OD 0.9/2.0/3.0mm | G.657.A1: 10mm G.657.A2: 7.5mm | OM1: 15mm Others: 7.5mm |
| | OD 1.6mm | G.657.A1: 10mm | - |

| Tensile Strength (Long Term/Short Term) | Duplex | Simplex |
|--|----------|---------|
| OD 3.0mm | 120/225N | 80/150N |
| OD 2.0mm | 90/150N | 60/100N |
| OD 1.6mm | 90/150N | - |
| OD 0.9mm | - | 3/6N |

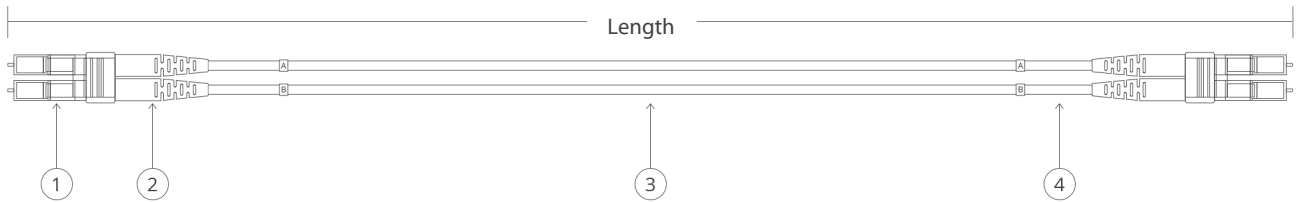
| Optical Characteristics | Description |
|--------------------------|--|
| Connector Insertion Loss | LC/SC/ST/FC/LSH/MU/MTRJ \leq 0.3dB |
| Connector Return Loss | SMF: UPC \geq 50, APC \geq 60 (LC/SC/ST/FC/MU/MTRJ), UPC \geq 55, APC \geq 75 (LSH) MMF: UPC \geq 30 (LC/SC/ST/FC/LSH/MU), UPC \geq 35 (MTRJ) |
| Attenuation at 1310nm | G.657.A1: 0.36dB/km G.657.A2: 0.4dB/km |
| Attenuation at 1550nm | G.657.A1: 0.22dB/km G.657.A2: 0.25dB/km |
| Attenuation at 850nm | 3.0dB/km |
| Attenuation at 1300nm | 1.0dB/km |

| Environmental Characteristics | Description |
|-------------------------------|-------------|
| Operating Temperature | -20~70°C |
| Storage Temperature | -40~80°C |

Transmission Distance Comparison

| Data Rate | Interface Type | Fiber Mode | Wavelength | Maximum Distance |
|------------|----------------|------------|------------|------------------|
| 1G | 1000BASE-LX | OM5 | 850nm | 550m |
| | | OM4 | 1300nm | 550m |
| | | OM3 | 1300nm | 550m |
| | | OM2 | 1300nm | 550m |
| | | OM1 | 1300nm | 550m |
| | | SMF | 1310nm | 10km |
| | 1000BASE-SX | OM4 | 850nm | 550m |
| | | OM3 | 850nm | 550m |
| | | OM2 | 850nm | 550m |
| | | OM1 | 850nm | 275m |
| 10G | 10GBASE-SR | OM4 | 850nm | 400m |
| | | OM3 | 850nm | 300m |
| | | OM2 | 850nm | 82m |
| | | OM1 | 850nm | 33m |
| | 10GBASE-LRM | OM5 | 850nm | 220m |
| | | OM3 | 1300nm | 220m |
| | | OM2 | 1300nm | 220m |
| | | OM1 | 1300nm | 220m |
| | 10GBASE-LR | SMF | 1310nm | 10km |
| | 10GBASE-ER | SMF | 1550nm | 30-40km |
| 10GBASE-ZR | SMF | 1550nm | 80-100km | |
| 40G | 40G-BIDI | OM5 | 850nm | 200m |
| | | OM4 | 850nm | 150m |
| | | OM3 | 850nm | 100m |
| | 40GBASE-SR4 | OM5 | 850nm | 150m |
| | | OM4 | 850nm | 150m |
| | | OM3 | 850nm | 100m |
| | 40G-SWDM4 | OM5 | 850nm | 440m |
| | | OM4 | 850nm | 350m |
| | | OM3 | 850nm | 240m |
| | 40GBASE-LR4 | SMF | 1310nm | 10km |
| 100G | 100GBASE-SR4 | OM5 | 850nm | 100m |
| | | OM4 | 850nm | 100m |
| | | OM3 | 850nm | 70m |
| | 100G-SWDM4 | OM5 | 850nm | 150m |
| | | OM4 | 850nm | 100m |
| | | OM3 | 850nm | 75m |
| | 100GBASE-SR10 | OM4 | 850nm | 125m |
| | | OM3 | 850nm | 100m |
| | 100GBASE-LR4 | SMF | 1310nm | 10km |
| | 100GBASE-ER4 | SMF | 1310nm | 40km |

Technical Drawing



① LC Connector

② Connector Boot

③ Cable Jacket 2.0mm OD

④ Heat Shrink Tub

* The total length of this cable is the distance from the connector ferrule at one end to the ferrule at the other end.

Cable Length Tolerances

| Cable Length | Duplex/Simplex | Multifiber |
|----------------------------------|----------------|-------------|
| $L \leq 0.5\text{m}$ | +5cm/-0cm | +8cm/-0cm |
| $0.5\text{m} < L \leq 5\text{m}$ | +10cm/-0cm | +12cm/-0cm |
| $5\text{m} < L \leq 10\text{m}$ | +15cm/-0cm | +15cm/-0cm |
| $10\text{m} < L \leq 30\text{m}$ | +20cm/-0cm | +20cm/-0cm |
| $30\text{m} < L \leq 100$ | +1%/ -0cm | +1%/ -0cm |
| $L > 100\text{m}$ | +1.5%/ -0cm | +1.5%/ -0cm |

Fiber Optic Connectors Guidance

1. LC



Long Form

- Lucent Connector/Little Connector/Local Connector

Typical Applications

- High-density connections, SFP and SFP+ transceivers, XFP transceivers

2. SC



Long Form

- Subscriber Connector/Square Connector/Standard Connector

Typical Applications

- Datacom and telecom; GPON; EPON; GBIC

3. FC



Long Form

- Ferrule Connector or Fiber Channel

Typical Applications

- Datacom, telecom, measurement equipment, single mode lasers

4. ST



Long Form

- Straight Tip

Typical Applications

- Datacom

5. LSH



Typical Applications

- Telecom, DWDM systems

6. MU



Long Form

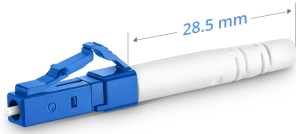
- Miniature Unit

Typical Applications

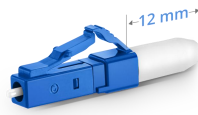
- LANs and telecommunication networks

Connectors Boot Type Introduction

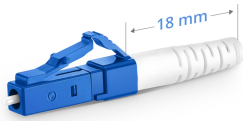
1. LC Boot Type



- Standard Boot (28.5mm)



- Short Boot (12mm)

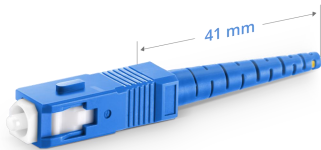


- Short Boot (18mm)
OD: 1.6/2.0mm

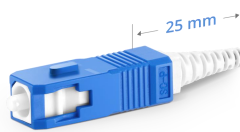


- Short Boot (18mm)
OD: 3.0mm

2. SC Boot Type



- Standard Boot (41mm)



- Short Boot (25mm)

Hot Products

| ID | Description |
|---------|--|
| #40191 | 1m (3ft) LC UPC to LC UPC Duplex OS2 Single Mode PVC (OFNR) 2.0mm |
| #40446 | 1m (3ft) LC UPC to LC UPC Simplex OS2 Single Mode PVC (OFNR) 2.0mm |
| #43134 | 1m (3ft) LC UPC to LC UPC Duplex OM2 Multimode PVC (OFNR) 2.0mm |
| #41730 | 1m (3ft) LC UPC to LC UPC Duplex OM3 Multimode PVC (OFNR) 2.0mm |
| #40180 | 1m (3ft) LC UPC to LC UPC Duplex OM4 Multimode PVC (OFNR) 2.0mm |
| #141727 | 1m (3ft) LC UPC to LC UPC Short Boot Duplex OM4 Multimode PVC (OFNR) 2.0mm |
| #130953 | 1m (3ft) LC UPC to LC UPC Short Boot Duplex OS2 Single Mode PVC (OFNR) 2.0mm |
| #130973 | Customized OS2 Single Mode LC/SC Short Boot |
| #141842 | Customized OM3 Multimode LC/SC Short Boot |



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